UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,258	10/05/2000	Junichi Kokudo	Q61120	8838

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EXAMINER
LEVITAN, DMITRY

ART UNIT	PAPER NUMBER
2662	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _29 December 2004_.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-33_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-33_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _6/18/04_
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Amendment, filed 12/29/2004, has been entered. Claims 1-33 remain pending.

Claim Objections

Claims 24 and 26 are objected to because of the following informalities: typographical error

STAB. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

Claims 3 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply

with the enablement requirement. The claim(s) contains subject matter which was not described

in the specification in such a way as to enable one skilled in the art to which it pertains, or with

which it is most nearly connected, to make and/or use the invention.

The specification does not provide sufficient details to enable a skilled in the art to make and use

the invention because it does not adequately describe the following:

Regarding claims 3 and 8, how execute authentication of MAC in AP, if the server fails.

The disclosure of the claimed protection method and apparatus does not describe how AP can get

access to MAC addresses data-base of the server if the server is down, and how steps of claim 1,

involving the server actions, will operate if the server has failed.

The specification does not provide enough details about the structure and operation of the

elements associated with the above identified claimed features to enable one skilled in the art to

make and use the invention without undue experimentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for

failing to particularly point out and distinctly claim the subject matter which applicant regards as

the invention.

Claim limitation "one wireless LAN system where roaming is not needed" is not understood as

written. Examiner does not understand why roaming could be needed in a LAN described in the

Application.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

2.   Claims 1, 2, 6, 7, 9, 12-17, 20-23, 25, 27-33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Ichikawa (US 6,307,837).

3.   Regarding claims 1, 6, 12-17, 20-23, 25, 27-30, Ichikawa teaches a method and an

apparatus for an authentication in a wireless LAN system (wireless packet network on Fig. 1 and

7:1-27), comprising:

Transmitting an authentication request from a STA to an AP wherein said authentication request

comprises a request from said STA to connect with said LAN (wireless terminal 1-7 sends a

startup request to the wireless bas station 1-6, step 2-1 on Fig. 3 and 7:45-49),

Requesting authentication of said authentication request from said AP to an authentication server

(terminal information request from base station 1-6 to terminal authentication server 1-8, step 2-2

on Fig. 3 and 7:49-53), by converting said authentication request to a protocol adaptable to said

server (inherently part of the system, because all signals at wireless base station have to go

through conversion from wireless format of a wireless terminal to the wired format of the

server),

Checking said authentication request based on MAC address of STA (terminal address

comparison section 15 on Fig. 2 and 9:12-20, wherein terminal address is Ethernet MAC address

7:27-33),

Executing encryption authentication at said AP with said STA based on designated encryption

algorithm (comparing random numbers and encrypting packets if the numbers match Fig. 3 and

8:2-13), and

Notifying an authentication completion from the server to said AP, after said authentication

server received a response of a completion of said encryption authentication from said AP

(sending authentication reception signal 2-6 on Fig. 3 allowing communication 8:2-9).

Ichikawa does not teach checking authentication request based on MAC address at the

server.

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to move checking authentication request based on MAC address from the base station to the

server in the system of Ichikawa to reduce the system cost, by combining MAC comparison

hardware from several base stations into one authentication server.

In addition, regarding claims 12-15, 20-22, 25, 27, Ichikawa teaches a first and second

authenticating parts (terminal authentication section 10 and terminal address section 15 on Fig.

2), based on first and second information certificates provided by the terminal (returned random

number 8:2-9 and terminal information 8:33-54), storing part for storing said second information

certificate (memory section 11 for storing terminal information 7:55-58) and communication part

to communicate with the server (inherently part of base station, because communication with the

server is essential for the system).

In addition, regarding claim 16, 17, Ichikawa teaches bas station 1-6, comprising

authentication, communication and connection control parts (see rejection of claim 1 above).

4.   Regarding claims 2 and 7, Ichikawa teaches, renewing a table of MAC address in said AP

by instruction from said authenticating server, after encryption authentication is completed

(storing terminal information/MAC, received from authentication server, in the terminal

information memory section 11, effectively updating table 1, 7:50-58 and 8:34-54).

5.   Regarding claims 31-33, Ichikawa teaches MAC address as globally unique hardware

identifier, comprising more than 10,000 different MAC addresses (MAC address as adopted in

Ethernet 7:28-33, wherein it comprises a global hardware address and in long version of 6 octets

long, can be used for more than 10, 000 different MAC addresses).

6.   Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa

in view of Lewis (US 6,453,159).

Ichikawa teaches all the limitations of parent claim 1 and 6 (see rejection of claim 1).

Ichikawa does not teach using shared key for a predetermined usable period.

Lewis teaches using shared key for a predetermined usable period (time limits on the access Fig.

4 and 10:28-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to use shared key for a predetermined usable period of Lewis in the system of Ichikawa to

improve the system security.

7.   Claims 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ichikawa in view of Lewis in further view of Admitted Prior Art (Application, pages 1-3).

Ichikawa in view of Lewis teaches all the limitations of parent claims 5 and 10 and inherently

teaches using MAC address authentication, if the shared key time limit expires, because the two

authentication operations in Ichikawa system are independent.

Ichikawa in view of Lewis does not teach shared key authentication method as open system

authentication.

Admitted Prior Art teaches shared key authentication method as open system authentication (Fig.

2 and pages 2, 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to use shared key authentication method as open system authentication of Admitted Prior Art in

the system of Ichikawa to improve the system compatibility with devices utilizing widely used

Open System Interconnection (OSI) layered approach.

8.   Claims 9, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ichikawa in view of Admitted Prior Art (Application, page 1).

Ichikawa substantially teaches the limitations of parent claim 6 and claims 16 and 17 (see

rejection of claim 1).

Ichikawa does not teach using WEP algorithm for authentication.

Admitted Prior Art teaches using WEP algorithm for authentication (WEP as a part of IEEE

standard).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to use WEP algorithm for authentication of Admitted Prior Art in the system of Ichikawa to

improve the system compatibility with devices utilizing widely used standard.

9.   Claims 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ichikawa in view of Lewis in further view of Admitted Prior Art (Application, pages 1-3).

Ichikawa in view of Lewis substantially teaches all the limitations of claims 24 and 26 (see

rejection of claims 1 and 4).

Ichikawa in view of Lewis does not teach shared key authentication method as open system

authentication.

Admitted Prior Art teaches shared key authentication method as open system authentication (Fig.

2 and pages 2, 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to use shared key authentication method as open system authentication of Admitted Prior Art in

the system of Ichikawa to improve the system compatibility with devices utilizing widely used

Open System Interconnection (OSI) layered approach.

Response to Arguments

10.   Applicant's arguments with respect to claims 1-11 have been considered but are moot in
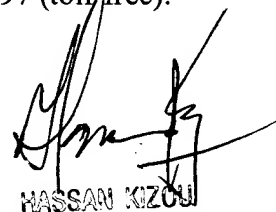
view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dmitry Levitan whose telephone number is (571) 272-3093. The

examiner can normally be reached on 8:30 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

DL

Dmitry Levitan
Patent Examiner.
02/10/2005

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